IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appln. No:	10/610,955
Applicant:	David Myr
Filed:	July 1, 2003
Title:	METHOD AND SYSTEM FOR OPTIMIZED REAL ESTATE APPRAISAL
TC/A.U.:	3629
Examiner:	Naresh Vig
Confirmation No.:	5768
Notice of Appeal Filed:	March 27, 2008
Docket No.:	MAK-104US

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

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S I R :

Responsive to the Notice of Panel Decision dated May 7, 2008, Appellant is submitting this Appeal Brief for the above-identified application.

This Brief is presented in the format required by 37 C.F.R. § 41.37, in order to facilitate review by the Board.

I. REAL PARTY IN INTEREST

The real Party In Interest in this matter is Makor Issues and Rights Ltd. by virtue of an assignment recorded on July 1, 2003, at Reel/Frame 014339/0872.

II. RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences known to Appellant, Appellant's legal representative, or Assignee which may be related to, be directly affected by, or have a bearing on the Board's decision in the pending Appeal.

III. STATUS OF CLAIMS

Claims 1-12 are pending and stand rejected. Claims 1-12 are appealed.

IV. STATUS OF AMENDMENTS

The present application is under Non-Final Rejection. All of the previous Amendments have been entered.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention relates to a computer-implemented method for appraising a real estate property (Substitute specification, p. 11, lines 11-16; p. 15, line 1-p. 16, line 19; p. 18, lines 12-18, and Figs. 1a-1d). The method includes storing influence factors and a range of influence factor values for each of different types of appraisal approaches (Substitute specification, p. 12, lines 14-17; p. 15, lines 4-8; and Fig. 1a). The method also includes performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches according to the stored influence factors and the stored range of influence factor values (Substitute specification, p. 11, line 11-p. 12, line 11; p. 13, line 6-p. 16, line 4; and Fig. 1b). The method further includes providing signals indicative of an optimal range of appraisal values for the real estate property from the performed nonlinear programming according to each of the different types of appraisal approaches (Substitute specification, p. 11, lines 11-16; p. 15, lines 8-9; p. 17, line 20-p. 18, line 2; and Fig. 1b). Each of the different types of appraisal approaches are a sales comparison approach, an income capitalization approach and a cost approach (Substitute specification, p. 9, lines 4-9).

The present invention also relates to a system for appraising a real estate property (Substitute specification, p. 11, lines 11-16; and p. 15, line 1-p. 16, line 19). The system includes a memory for storing influence factors and a range of influence factor values for each of different types of appraisal approaches (Substitute specification, p. 12, lines 14-17; p. 15, lines 4-8; and Fig. 1a). The system also includes a calculator for: 1) performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches according to the stored influence factors and the range of stored

influence factor values and 2) determining an optimal range of appraisal values for the real estate property from the performed nonlinear programming according to each of the different types of appraisal approaches (Substitute specification, p. 11, line 11-p. 12, line 11; p. 13, line 6-p. 16, line 4; and Fig. 1b). The system also includes an output for providing signals indicative of the optimal range of appraisal values for the real estate property (Substitute specification, p. 11, lines 11-16; p. 15, lines 8-9; p. 17, line 20-p. 18, line 2; and Fig. 1b). Each of the different types of appraisal approaches are a sales comparison approach, an income capitalization approach and a cost approach (Substitute specification, p. 9, lines 4-9).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

1) Claims 1 - 12 have been rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter.

2) Claims 1 - 12 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

3) Claims 1 - 12 have been rejected under 35 U.S.C. § 112, second paragraph, as being vague and indefinite.

4) Claims 1 - 12 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Robbins (U.S. 2001/0039506) in view of "Modern Real Estate Practice" by Galaty et al.

VII. ARGUMENT

A. Rejection of claims 1-12 under 35 U.S.C. §101 as being directed to non-statutory subject matter

Claims 1 - 12 have been rejected under 35 U.S.C. § 101 as being directed to non-statutory subject matter. In particular, the rejection argues that the claimed invention does not produce concrete results because:

> ...the user is required to program the computer system to generate the result they desire. After the user has programmed the computer, applicant's claimed invention is display the result of the appraisal value to the user. Two user using applicant's invention can program the device differently which will produce different results even when

they use the same data of influence factors and range of influence factor.

The Office Action appears to argue that two different users will program the device and produce different results, even when using the same influence factors and range of values. The rejection is respectfully traversed.

Claim 1 recites: "performing nonlinear programming with a **predetermined nonlinear objective function** that uses each of the different types of appraisal approaches according to the **stored influence factors** and the **stored range** of influence factor values" (emphasis added). Claim 12 includes a similar recitation. Appellant notes that, during patent examination, the Patent Office is entitled to construe pending claims under their "broadest reasonable interpretation consistent with the specification." See MPEP §2111 citing *Phillips v. AWH Corp.*, 415 F.3d 1303, 75 USPQ2d 1321 (Fed. Cir. 2005). Nonlinear programming is specifically described in the substitute specification at p. 12, line 1-p. 14, line 15. Based on the description in the substitute specification, the skilled person would understand that two people that apply a) the same influence factors and b) the same range of influence factor values as inputs to nonlinear programming that **uses a predetermined objective function would produce the same result**. Thus, because a predetermined objective function is used (as shown at p. 13, line 7-p 14, line 15 of the Substitute specification), a same result will be generated. Thus, concrete and tangible results are provided. Accordingly, Appellant respectfully requests that the rejection of claims 1 - 12 under 35 U.S.C. § 101 be withdrawn.

B. Rejection of claims 1-12 under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement

Claims 1 - 12 have been rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. In particular, it is asserted that the limitation "performing nonlinear programming with a predetermined nonlinear objective function" is not supported by the disclosure originally filed July 1, 2003. This rejection is respectfully traversed.

Support for this feature can be found, for example, at p. 8, line 1 - p. 9, line 3 of the specification originally filed July 1, 2003. Appellant notes specifically, at p. 8,

lines 8-9 of the originally filed specification which recites "The optimization system described here belongs to **nonlinear programming** because of nonlinearities brought into the objective function by some of the influenced variables" (emphasis added).

In addition, Appellant notes that the phrase "nonlinear programming" was recited in the claims as originally filed. Appellant respectfully points out that not only the original disclosure contained in the summary and detailed description of the invention portions of the specification must be considered, but also the original claims must be considered, to determine whether there is 35 U.S.C. § 112, first paragraph support for the claim limitation. See MPEP §2181(IV).

Furthermore, Appellant notes that that it is well established that the subject matter of the claims need not be described literally in order for the disclosure to satisfy the description requirement. See MPEP § 2163.02. Thus, because the specification describes what is meant by "nonlinear programming" at p. 8, line 1-p. 9, line 3 of the originally filed specification, there is support for this claimed feature.

Accordingly, for the reasons set forth above, Appellant respectfully requests that the rejection of claims 1 - 12 under 35 U.S.C. § 112, first paragraph, be withdrawn.

C. Rejection of claims 1-12 under 35 U.S.C. §112, second paragraph, as being vague and indefinite

Claims 1 - 12 have been rejected under 35 U.S.C. § 112, second paragraph, as being vague and indefinite. In particular, with respect to claim 1, the Office Action asserts that:

> ...it is not clear whether performing of nonlinear programming is actually programming the computer, or, it is inputting of property related data in the computer which is already has nonlinear program.

The Office Action also asserts, with respect to claim 12, that:

> ...it is not clear whether calculator performs limitations as recited, or, it is applicant's intention on how the calculator will be used.

This rejection is respectfully traversed.

Claim 1 recites performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches according to the stored influence factors and the stored range of influence factor values. Claim 12 recites a calculator for... performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches according to the stored influence factors and the range of stored influence factor values. Appellant respectfully notes that, as discussed above, it is well settled that the pending claims must be given their broadest reasonable interpretation consistent with the specification. See MPEP § 2111. Thus, **based on the description** at p. 11, line 11 - p. 16, line 4 of the substitute specification, the skilled person would understand that claims 1 and 12 determine an optimal range of appraisal values by performing nonlinear programming with: 1) a predetermined nonlinear objective function that incorporates each of different types of appraisal approaches (specifically described at p. 13, line 7-p 14, line 15 of the substitute specification), 2) stored influences factors and 3) a stored range of influence factor values. Accordingly, the rejection is incorrect by interpreting Appellant's claimed feature of "performing nonlinear programming" without consideration for the description in Appellant's specification. Accordingly, Appellant respectfully requests that the rejection of claims 1 - 12 under 35 U.S.C. § 112, second paragraph, be withdrawn.

D. Rejection of claims 1-12 under 35 U.S.C. § 103(a) as being unpatentable over Robbins in view of Galaty et al.

Appellant's claim 1 relates to a method for appraising a real estate property that includes performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches (a sales comparison approach, an income capitalization approach and a cost approach), to determine an optimal range of appraisal values. The entire issue under Appeal is whether or not the combination of Robbins and Galaty et al. discloses or suggests performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches.

In summary, Appellant's claim 1 relates to a step of performing nonlinear programming with a predetermined nonlinear objective function that uses each of the

different types of appraisal approaches, to determine an optimal range of appraisal values. There is disagreement between Appellant and the PTO as to whether the combination of Robbins and Galaty et al. discloses or suggests performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches. Appellant's position is that this feature is absent in the cited art. The Examiner's position is that this feature is disclosed in the cited art.

The most recent Office Action argues that Robbins in view of Galaty et al. discloses Appellant's claimed features as follows:

> ...Robbins teaches that In determining the market value of a subject property an appraiser generally considers three separate approaches to value; the Cost Approach, the Income Approach, and the Sales Comparison Approach [Robbins, 0080]...
>
> ...Therefore, it would have been obvious to one of ordinary skill in the art... to modify Robbins with teachings of Galaty and generate appraisal using sales comparison approach, the cost approach and the income approach to make the appraisal more useful by checking valuations from different approaches against each other for narrowing the range within which the final estimate of value falls.

Page 5 of the Office Action acknowledges that Robbins "does not explicitly teach using all three sales comparison approach, an income capitalization approach and a cost approach as different types of appraisal approaches."

Appellant will next give clarification of the issue under Appeal. For a reference to be properly used to reject Appellant's claim 1, the reference would need to show a step of performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches. The Office Action argues that the use of the combination of each of three different appraisal approaches is suggested by Robbins. In particular, the Office Action refers to paragraph [0080] of Robbins. Paragraph [0080] of Robbins discloses that "an appraiser generally considers three separate approaches to value; the Cost Approach, the Income Approach, and the Sales Comparison Approach." Appellant notes that Robbins, in paragraph [0080], also teaches that: 1) "the invention is **specific to** the Sales Comparison Approach" and 2) that the invention **assists in the reliability of the sales comparison approach** by providing access to an increased

number of substitute properties. Furthermore, at paragraph [0081], Robbins teaches that the appraiser considers the appropriateness of the approaches to value in order to **select the most appropriate approach**. Appellant, however, claims performing **nonlinear programming with a predetermined nonlinear objective function** that **uses each** of the different types of appraisal approaches.

Appellant will next describe the real estate appraisal method disclosed by Robbins. Robbins teaches the determination of a real estate parcel's market value through the **application of the sales comparison approach** (paragraph 0076]). Robbins discloses, in Figs. 3 and 4, that: 1) a set of procedures are created to **build property attribute databases** and 2) a set of procedures are created **to apply the rules of appraisal** to the property attribute databases in order to estimate the value of a subject property (paragraph [0105]). Robbins further discloses, in Figs. 4 and 5, the development of a **sales condition score** (for the sales comparison approach) for individual parcels that may be used to suggest to the user a relationship between a comparables selling price and its attribute inventory (paragraphs [0133]-[0144]). However, Robbins does not disclose or suggest **performing nonlinear programming** with a **predetermined nonlinear objective function** that **uses each of the different types** of appraisal approaches, to determine an optimal range of appraisal values, as required by claim 1. In contrast, Robbins teaches constructing property attribute databases and determining a sales condition score for **one approach** (i.e., the sales comparison approach).

In summary, Robbins do not disclose or suggest Appellant's claimed features of **performing nonlinear programming** with a **predetermined nonlinear objective function** that **uses each of the different types** of appraisal approaches, to determine an optimal range of appraisal values (emphasis added). As set forth above, this feature is completely absent from Robbins. Thus, Robbins does not include all of the features of claim 1.

The Office Action rejects Appellant's claim 1 by combining Robbins with Galaty et al. The Office Action, at p.5-p. 6, argues that Galaty et al., at p. 305-p. 313, teach performing nonlinear programming with a predetermined objective function that uses each of the different types of appraisal approaches according to the stored

influence factors and the range of influence factor values. Appellant respectfully disagrees with the citation of Galaty et al. against Appellant's claim 1.

Appellant will next describe the appraisal value calculations disclosed by Galaty et al. Galaty et al. disclose that appraisers traditionally use the sales comparison approach, the cost approach and the income approach, where the three methods **serve as checks against each other** (p. 304, last paragraph). At p. 305-p. 312, Galaty et al. disclose **linear calculations for separately appraising** value by each of the three methods. At p. 312, Galaty et al. disclose that, **for reconciliation, three separate indications of value** are determined by each of the three methods and then **a weighted average** is used to generate a "single estimate of market value" (emphasis added). The teaching of reconciliation of the appraisal methods, however, has nothing to do with Appellant's claimed feature of performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches. This claimed feature is neither disclosed nor suggested by Galaty et al. Thus, Galaty et al. do not make up for the deficiencies of Robbins.

Accordingly, claim 1 is patentable over the combination of Robbins and Galaty et al.

Claims 2 - 11, which include all of the limitations of claim 1, are submitted by Appellant to be patentable over Robbins and Galaty et al. for at least the same reasons as claim 1.

Although not identical to claim 1, claim 12 includes similar features that are neither disclosed nor suggested by the cited art. Namely, a calculator for performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches and determining an optimal range of appraisal values from the nonlinear programming according to each of the different types of appraisal approaches (a sales comparison approach, an income capitalization approach and a cost approach). As discussed above, these features are neither disclosed nor suggested by the combination of Robbins and Galaty et al.

Accordingly, claim 12 is patentable over the combination of Robbins and Galaty et al. for at least the same reasons as claim 1.

CONCLUSION

Allowance of the above-identified application is respectfully requested.

Respectfully submitted,

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Dated: June 9, 2008

VIII. CLAIMS APPENDIX

1. (Previously Presented) A computer-implemented method for appraising a real estate property, the method comprising the steps of:

a) storing influence factors and a range of influence factor values for each of different types of appraisal approaches;

b) performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches according to the stored influence factors and the stored range of influence factor values; and

c) providing signals indicative of an optimal range of appraisal values for the real estate property from the performed nonlinear programming according to each of the different types of appraisal approaches,

wherein each of the different types of appraisal approaches are a sales comparison approach, an income capitalization approach and a cost approach.

2. (Previously Presented) A method according to claim 1, step (a) further including the step of automatically optimizing the stored range of influence factor values of each of the different types of appraisal approaches.

3. (Previously Presented) A method according to claim 1, step (b) further including the step of automatically eliminating all discrepancies or outliers of the stored influence factors.

4. (Previously Presented) A method according to claim 1, step (c) further including the step of automatically obtaining a respective optimal range of appraisal values for each of the different types of appraisal approaches.

5. (Previously Presented) A method according to claim 1, step (c) further including the step of automatically performing a feasibility study to determine whether the optimal range of appraisal values meets predetermined economic return requirements for the real estate property.

6. (Previously Presented) A method according to claim 1, step (c) further including the step of automatically performing a sensitivity analysis using the stored influence factors for each of the different types of appraisal approaches together to determine a sensitivity of the optimal range of appraisal values to changes in each of the stored influence factors.

7. (Previously Presented) A method according to claim 1, wherein the method automatically reconciles the optimal range of appraisal values for each of the different types of appraisal approaches.

8. (Previously Presented) A method according to claim 1, the method further including the step of repeating step (b) to search for combinations of the stored influence factors that automatically produce a same optimal value as for the stored influence factors individually.

9. (Previously Presented) A method according to claim 1, step (c) further including the step of automatically performing a highest and best use analysis to determine a financial feasibility criteria for each separate use.

10. (Previously Presented) A method according to claim 1, wherein the predetermined nonlinear objective function uses project periods that are considered in one of the different types of appraisal approaches.

11. (Previously Presented) A method according to claim 1, step (c) further including the step of optimally calculating different capitalization rates that are considered in one of the different types of appraisal approaches.

12. (Previously Presented) A system for appraising a real estate property, the system comprising:

a memory for storing influence factors and a range of influence factor values for each of different types of appraisal approaches;

a calculator for 1) performing nonlinear programming with a predetermined nonlinear objective function that uses each of the different types of appraisal approaches according to the stored influence factors and the range of stored influence factor values and 2) determining an optimal range of appraisal values for

the real estate property from the performed nonlinear programming according to each of the different types of appraisal approaches; and

an output for providing signals indicative of the optimal range of appraisal values for the real estate property,

wherein each of the different types of appraisal approaches are a sales comparison approach, an income capitalization approach and a cost approach.

IX. EVIDENCE APPENDIX

None

X. RELATED PROCEEDINGS APPENDIX

None